



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,624	10/24/2003	James David Frost	62004-1791	1506
24504	7590	08/02/2005	EXAMINER	
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948			RAEVIS, ROBERT R	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,624

Applicant(s)

FROST ET AL.

Examiner

Robert R. Raevis

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-22 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

The disclosure is objected to because of the following informalities: the status of the parent should be updated on the top of page 1.

Appropriate correction is required.

Claims 6,10-12,7,18,19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 6, "each of the surface textures for select friction sleeve" (line 4) seems to suggest that the apparatus includes a plurality of sleeves, but only one sleeve is called for. Either "sleeves" (line 4) lacks antecedent basis, or the "sleeves" are not connected to the remaining claim limitations.

As to claims 18, 19, are the "plurality of load cells" (line 2) in addition to the "load cell" (of claim 16) for a total of at least three load cells?

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2,4-6,8,9,11,15,16,20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kram et al '940 in view of Sidey.

Kram et al teach (Figure 2) an apparatus to determine pore fluid and soil properties, including: tip 24; member 22 coupled to the tip, the member including a

Art Unit: 2856

pressure sensor 30, wherein the pressure sensor obtains a measurement of pore pressure.

Kram does not call the member a mandrel, does not call the member a module, and does not describe the structure of the sensor.

As to claims 1,15, Kram teaches use of o-rings 44,42 to seal the member, suggestive that the apparatus can benefit from replacement of the o-rings over time to assure sealing, suggestive that the member is interchangeable, and thus a module. In addition, the member 22 is shaped like a shaft and supports a working tip 24, and to that extend may be deemed to be a mandrel. Finally, it would have been obvious to employ any known pore pressure sensor in Kram because Kram's generic teaching of pressure sensor 30 is suggestive of any known pore type pressure sensor. Sidey teaches use of a piezo element (col. 3, lines 43-63) to measure pore pressure, suggestive of piezo usage.

As to claim 2, the penetrometer employs wiring and connections to pass power and data within the penetrometer. Also, it is known to utilize pre-amps to convey readable data.

As to claim 4, note load cells 25 and 26.

As to claim 5, note that sensor 30 is adjacent to load cell 26.

As to claims 6,11,16,22, note friction sleeve 22.

As to claims 8,20, Kram relates data to "depth" (col. 3, line 52) measurements.

As to claim 9, note Kram's "on board data acquisition system 21" (col. 3, line 49).

As to claim 20, Kram measures (col. 4, lines 14-16) inclination.

Art Unit: 2856

As to claim 21, Kram employs a "digital" (col. 3, line 51) system.

Claims 3, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kram et al in view of Sidey as applied to claim 1 above, and further in view of Cooper et al.

As to claim 3, it would have been obvious to classify Kram's tip as a CPT tip because it is "used to classify soils and characterize sites" (col. 1, line 14, of Cooper et al.).

As to claim 13, Kram's data acquisition system 21 includes "depth" (col. 3, line 52, and Figure 7) determinations, "inclinometer" (col. 4, line 14), and printer 27/monitor 29 for display of data.

As to claim 14, Kram converts data into "digital" (col. 3, line 51) for storage. Storage of a variety of data parameters into a single memory is routinely done so via MUX components.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Babineau et al teach a « CTP » (col. 1, line 50) system with (col. 1, lines 41-42) measurement of pore pressure.

Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raavis whose telephone number is 571-272-

Art Unit: 2856

2204. The examiner can normally be reached on Monday to Friday from 7am to 4pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rae

RAZVI